

SERVOGLAS 6000



6000X



6000V



Declaration of Conformity. We, the manufacturer 'Servore Co.,Ltd Korea' declare that the product(s) listed here is in conformity with the following standards and directives. The construction file for this product is held by Servore [the Manufacturer] and may be inspected on request by contacting Servore Co.,Ltd Korea, at: 410-3 Tojin-ri Cheongbuk-myeon Pyeongtaek-si Gyeonggi-do Korea Tel. +82(31)684-6952-3 or their authorised representatives. Welding helmets model reference Servoglas 6000 and others as may be claimed by Servore as compliant Autodarkening Welding Helmets conforming to EN175, 1997 and EN379, 2003. 89/686/EEC

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USER'S MANUAL

AUTO-DARKENING WELDING HELMET

SERVOGLAS
6000

ULTRA LIGHTEN SPEEDY
AUTO DARKENING WELDING HELMET



6000V

6000X

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Instructions for use of ServoGlas® 6000

Thank you for purchasing a ServoGlas® 6000 welding helmet.



Note

For your own protection, safety and to ensure the maximum service life of your new helmet please read this manual carefully before use. Misuse or abuse may result in injury or reduced protection and may also void your warranty.

1. Before Use

ServoGlas 6000 features an easy to use digital control set giving you control over Shade, Sensitivity, Delay and allowing you to switch the helmet to grind mode. In grind mode the helmet will not auto darken.

The auto darkening welding filter in the 6000 has been designed for arc welding and gas cutting. It is suitable for all normal arc welding processes such as MIG, MAG, TIG, SMAW, Plasma Arc and Air Carbon welding.

Before use the shade control should be adjusted to the appropriate level based upon EN169 (European Standard specifications or equivalent) or other appropriate safety guidelines. When in doubt please consult your safety representative or your authorized ServoGlas® 6000 distributor.

The ServoGlas® 6000 provides continuous protection from ultraviolet and infrared radiation to the maximum level indicated on the product and as described in the relevant Standards. This protection is fail-safe and is not compromised by loss of battery power or other electronic failure.

The ServoGlas® 6000 welding filter cartridge is fitted with four independently operated sensors that detect the welding arc and respond accordingly resulting in the appropriate darkened filter state as set by the user and as indicated on the scaled adjustment. Please note that professional judgement may be required to achieve the best results. When in doubt consult an authorized safety representative or your ServoGlas® distributor and always maintain a conservative attitude towards operation.

Two replaceable lithium batteries type CR2032 (3V) are used as major power sources. An additional solar cell panel extends battery life and ensures efficient operation. When operating normally the welding helmet will switch on automatically and switch off automatically to save power a few minutes after the last welding arc has been detected.

To provide a general check of system status you may wish to set the shade control to 11 and hold the helmet towards a bright incandescent light source. Under normal circumstances the filter will change from light to dark state and back to light state again as you move the helmet away. Please note that if you have any questions or there is any doubt about the performance of your Servore product you should refer to your authorized safety representative or ServoGlas® distributor.



Note

- Always use genuine ServoGlas® 6000 front and inside cover plates. Failure to do so may result in injury and will void the warranty.
- The ServoGlas® 6000 is not designed for overhead welding without the use of additional protection.
- Check your helmet for physical damage and test it regularly. If your helmet is damaged or is not working normally have it tested and repaired before use.
- Always select the appropriate shade before use according to the type of welding and current/amperes used. When in doubt refer to your authorized safety representative.

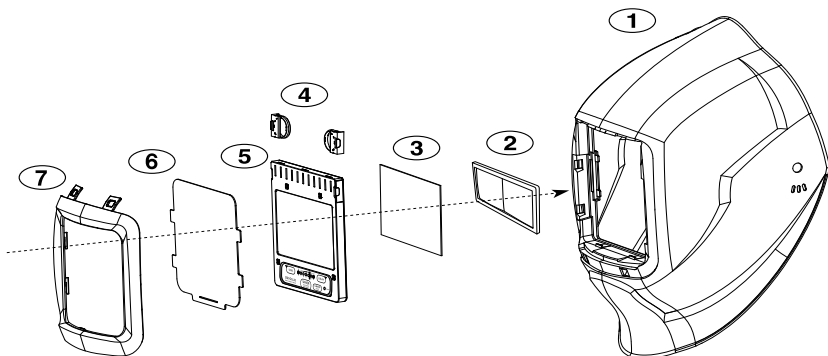


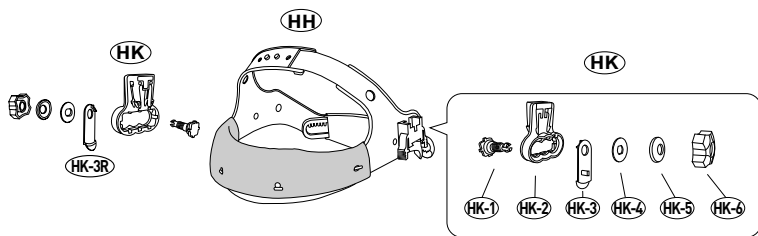
2. Parts List

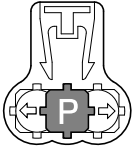
The following parts are available from Servore and your authorized ServoGlas® 6000 distributor.

Helmet Knob Parts

Part No.	Parts
1	Helmet shell
2	Magnifying Lens(108X51mm)
3	Inner Cover Plate
4	Battery Case
5	Auto-darkening Welding Filter
6	Front Cover Plate
7	Front Cover





Part No.	Parts	Helmet Adjustment
HH	Head Harness	 Move P-bolt back and forth to adjust the helmet distance between eyes and filter window.
HK	Helmet Knob Set	
HK-1	P-Bolt	
HK-2	Band Holder	
HK-3L	Angular Stopper L	
HK-3R	Angular Stopper R	
HK-4	Angular Washer	
HK-5	Washer	
HK-6	Knob	

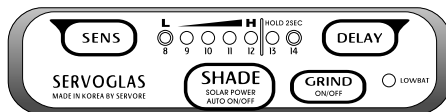
2-1. Technical Specifications

Shade Level	Inactivated-Light shade #3 Activated-Dark shade #8-#14
Eye Protection	Full time UV and IR protection to Shade 15
Switching Time(light to dark)	1/25,000sec(0.04msec)
Switching Delay(dark to Light)	5 Step adjustment fast(0.05)-slow(0.8)
Sensors	4
Sensitivity Adjustment	5 Step adjustment Lo-Hi
Power Supply	3V lithium (CR2032) 2EA (user replaceable)
Battery Life	2000hours(Approximately)
Supplementary Power	Solar cell(Auto On/Off)
Replaceable Battery	Low battery indicator
Cartridge Size	133 x 116 x 10mm
Filter Window	X: 100 x 67mm, V: 96 x 46mm
Total Weight	X: 530g V: 510g
Operating Temperature	-5°C to +55°C
Storage Temperature	-20°C to +70°C





3. Control Function



3-1. Shade Control



The **shade control** has two ranges 8 to 12 and 13/14. To move between the two ranges hold the shade button down for two seconds. Single presses of the shade button will allow you to adjust the shade. The LED's will indicate the shade number.

Note that when in the grind mode the shade control will not function.

⟨Recommended shade numbers according to BS 679, DIN 4647-1 and EN169⟩

Welding Process	Current in amperes															
	0.5	2.5	10	20	40	80	125	175	225	275	350	450				
	1	5	15	30	60	100	150	200	250	300	400	500				
Covered electrodes	9				10	11		12			13		14			
MIG on heavy metals					10		11		12			13		14		
MIG light alloys					10		11		12		13		14		15	
TIG on all metals and alloys	9			10	11	12		13		14						
MAG					10		11	12	13			14		15		
Arc-air gouging	10							11	12	13	14	15				
Plasma jet cutting							11		12		13					
Microplasma arc welding	4	5	6	7	8	9	10	11	12	13		14			15	

According to the conditions of use, the next greater or the next smaller scale number can be used.

3-2. Delay Control



Use the delay control to change how quickly the screen clears after you stop welding. Please note that this control does not change the speed at which the helmet darkens. Using this control will help reduce eye strain when working on welding with high residual heat and tack welding.

3-3. Light Sensitivity Control



Use the sensitivity control when working near other welders or on reflective surfaces.

Adjust the sensitivity by repeated pressing the button. The LED's will cycle through indicating the setting from high to low.

3-4. Grind mode button



Pressing the grind mode button switches the helmet into grinding mode. In this mode the helmet will not darken and the shade, sensitivity and delay controls will not function. Pressing the grind button again returns the helmet to its normal auto darkening function. In the grind mode the green LED under the L will pulse very faintly. If the helmet is not used for approximately 30 mins the helmet will automatically return to the welding mode.

4. Maintenance



Note

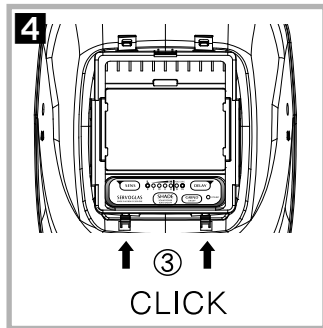
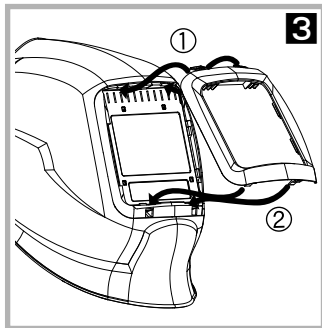
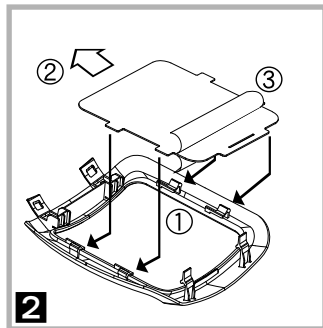
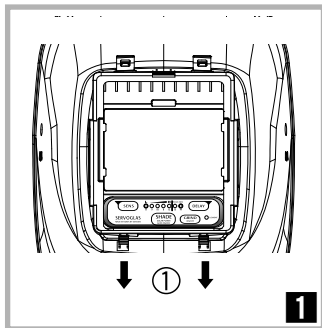
Always ensure that all maintenance procedures are conducted in a clean dry place. Use clean dry hands and avoid direct contact with any glass surfaces. Handle cover plates and welding filters by the edges and carefully clean off any dirt or debris before re-use.

4-1. Changing the front cover plates

- 1** To change the front cover lens push the two lugs at the base of the auto darkening filter (accessible from the inside of the helmet) downwards and push gently out.
- 2** The old cover lens can now be removed and the new cover lens put into the mounting frame. Be sure to remove the protective film from both sides of the cover lens!
- 3** Replace the frame by first locating the lugs at the top of the frame in the corresponding slots in the helmet shell.
- 4** Snap the two lugs back into place at the bottom of the frame and check that a tight seal has been achieved all around.

To remove the auto darkening filter first completely remove the front cover lens frame and then locate the small locking tag at the top of the auto darkening (see picture 4 above). Gently lift this tab and the filter will drop out.

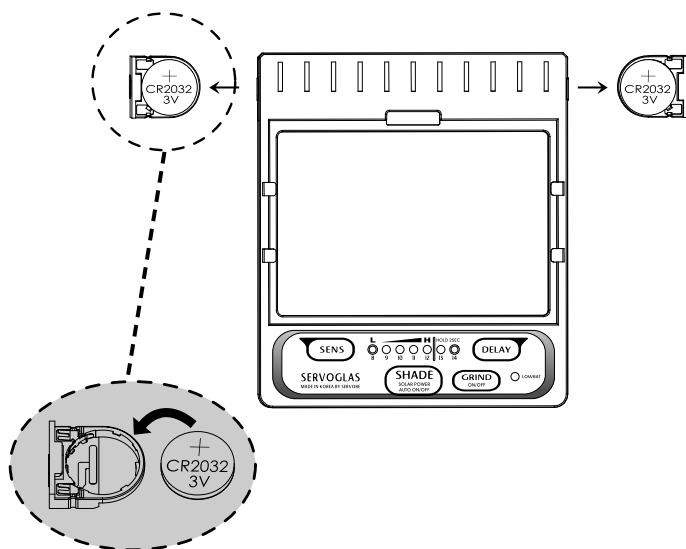
WARNING: Be sure to be ready to catch the filter as you lift the tab!

**Note**

Always use genuine Servore parts. Never use a welding helmet without both front and inner cover lenses installed.

4-2. Changing the battery

Batteries usually last about two years. A low battery light will pulse when they need to be replaced. Remove the auto darkening filter (see overleaf) and change both batteries at the same time observing polarity and using high quality batteries.



Note

Always note the polarity of the batteries and install them as shown in the diagram and as marked. Batteries rely on good electrical contact to function properly and so always use clean dry hands and avoid getting dirt inside the cartridge when exchanging batteries.



5. Storage and Temperature Range

Your Servore welding helmet is strong and durable. It is designed to work in temperatures between -5C and +55C. Do not use your helmet in very hot conditions where temperatures exceed +65C. Always store your helmet in a clean dry place out of the direct sun and protect it from exposure to moisture or extreme heat (min/max storage temperature is -20C ~ +70C).

Avoid unnecessary impact or compression of your helmet and never use a helmet that is damaged. Your Servore welding helmet is a quality professional tool and careful storage will extend the life of your investment.

6. Inspection

Check your helmet shell and filter on a regular basis when in normal use and after extended periods of storage. Never use a cracked or damaged helmet as this may result in personal injury and will void your warranty.

Please replace any worn or damaged parts as necessary.

Genuine ServoGlas® replacement parts are available from your authorized ServoGlas® distributor.

7. Cleaning



Note

Never expose the filter cartridge to direct contact with water or solvents.

After removing the welding filter from the shell the shell can be cleaned using a mild detergent and water solution. Sweat bands can be washed. A silicone based lubricant may be used on moving parts if necessary but is not normally required. The filter may be carefully wiped with a cloth dampened with household window cleaning solution. Please be careful not to scratch or otherwise damage the filter cartridge with fragments of welding spatter or other abrasive dirt. Refer to the relevant parts diagram for illustrations regarding assembly and disassembly.

8. Cautions



- The ServoGlas® 6000 is designed for personal eye and face protection from harmful radiation, sparks and welding spatter produced under normal welding conditions. Please follow good industry and safety practices and use additional protection where necessary.
- Cover plates are strong and of industry standard quality but they are breakable. The ServoGlas® 6000 is a quality welding helmet but is not designed to provide protection from severe impact such as broken grinding wheels or debris from other broken tools, corrosive liquids, explosions, or other extreme incidents. We recommend you always adopt a conservative attitude towards safety and take additional precautions as required and recommended in the relevant safety standards relating to the operation you are undertaking.
- The welding filter is not designed to be waterproof. Please do not use your helmet in the rain or other inclement weather. To do so may reduce the life of your helmet and result in damage or injury.
- In the event that your helmet or welding filter is exposed to direct contact with, or is submerged in water or other liquid immediately stop using the helmet, remove the filter cartridge from the shell, remove the batteries from the filter, inspect carefully for damage and if necessary mop-up excess moisture with a paper towel and then leave to dry in a warm (not hot) place out of direct sunlight. Never place your helmet in an oven or microwave to dry. Before use perform all normal system checks and if in any doubt contact your ServoGlas® distributor. Your Servore helmet is a precision engineered professional protection product and must be maintained in good condition to ensure your personal protection.

**Cautions**

- When working in the vicinity of other welders it is necessary to adopt good industry standard practice and ensure a minimum distance of 1M between workers. Failure to do so may result in injury or malfunction of the auto darkening mechanism.
- Please do not wear the helmet when you are not welding. In some circumstances the auto darkening mechanism may be unexpectedly triggered resulting in reduced vision and subsequent injury to yourself or others.
- Servore does not support the use of ServoGlas® 6000 range of products in combination with any other manufacturers' products. To use parts that are not approved by Servore may void your warranty and result in personal injury. Please use only genuine ServoGlas® 6000 parts and spares as provided by your authorized ServoGlas® distributor.
- Servore reserves the right to make improvements, change or otherwise modify the specifications, materials and design of any and all Servore products at their sole discretion with a view to ensuring continuous improvement. Never attempt any unauthorized modifications or alterations to your Servore product. To do so may result in personal injury and void your warranty.

Thank you for purchasing a Servore product. If you have any questions regarding this or any other Servore product please contact your authorized ServoGlas® distributor.